$$\Delta f_s = E_s e \qquad \text{(Eq. 3.4)}$$

where: Δf_s = loss of prestress in steel due to elastic shortening

E_s = modulus of elasticity of the prestressing strand (taken as 28,500 ksi)

e = measured detensioning strain

Table 3.7 Measured vs. Predicted Prestress Loss Due to Elastic Shortening

	Loss in Prestress (ksi)			
	Girder A4	**Girder B4**	**Girder C4**	**Girder D4**
Measured (Eq. 3.4)	12.8	14.3	0.6	0.4
Predicted (Eq. 3.1-3.3)	18.1	18.1	12.0	12.0
% Difference	29%	21%	95%	97%

Table 3.7 shows that the prestress loss due to elastic shortening based on the strain measurement is less than the predicted values presented in Section 3.3.4. Therefore, it appears that the total prestress loss for Type IV Girder given in Table 3.3 is slightly overestimated.

The strain values for the Type III girders (the last two columns of Table 3.6) are much smaller than expected. It indicates that the gages failed to record the entire compressive strain during detensioning. It is suspected that the failure in the strain measurement is due to inadequate consolidation of concrete around the embedded gages.

3.8 Camber

Camber was measured at mid-span of each girder, 1 hour and 24 hours after detensioning. Both readings were identical and are listed in Table 3.8. Figure 3.40 shows the camber of girder D4 as it separates from the casting bed.